

# Mineral Industry Surveys

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## ZINC IN MAY 2005

Domestic mine production (recoverable) of zinc in May of 53,300 metric tons (t) was about 6% less than that in April and about 1% less than that in May 2004, according to the U.S. Geological Survey. Estimated smelter production of 23,900 t was about 2% more than in April and about 16% less than in May 2004. Apparent consumption of 82,900 t was about 9% lower than in April and 21% lower than in May 2004.

The Platts Metals Week average composite price for North American Special High Grade zinc decreased to 60.46 cents per pound in May. The price was 4.1% (2.57 cents per pound) lower than in April but 16.8% (8.7 cents per pound) higher than in May 2004. The average London Metal Exchange Ltd. (LME) cash price decreased to \$1,243.23 per metric ton, a 4.4% decrease compared with the April price, but 21% higher than that in May 2004. During May, LME zinc stocks dropped by 23,450 t to 522,925 t.

In Europe, the zinc market remained tight even though the steel mills reported increased stocks and lower prices for galvanized products. The tight market was attributed to stockpiling in anticipation of additional cuts at zinc smelters. Stocks of galvanized sheet have increased in Europe, as imports grew by 20% to 25% in the first quarter of this year and by 50% to 55% when compared with those of the first quarter of 2004. This could indicate that zinc consumption for galvanizing has been shifting away from Europe (CRU International Ltd., 2005).

In North America, consumers were well supplied and producers' premium continued to weaken (down 0.25 cent per pound in May). Big River Zinc Corp.'s (Illinois) labor contract negotiation was settled, and Teck Cominco Limited (Vancouver, Canada) reportedly was confident its contract negotiations were not going to be a problem (CRU International Ltd., 2005).

China produced 231,000 t of refined zinc in April, and for January through April produced 842,000 t, up by 6.9% year-on-year. China's output of zinc-in-concentrates for April was 132,000 t and was 479,000 t (up 1.3%) for January through April. Zinc prices in China did not fall as sharply in May as did the LME prices, and traded in a narrower price range reflecting the strong demand within China and the relatively low production cost. Chinese zinc consumption in the first quarter was not as high as that in previous years owing to cold weather

in the North that resulted in the late start of production at some galvanizing plants (Antaike, 2005).

Vedanta Resources (India) completed a major expansion of refined zinc capacity on time and at a cost 15% below budget. Its capacity increased from 170,000 metric tons per year (t/yr) to 400,000 t/yr of refined zinc metal with the addition of a new electrolytic smelter. A new 154-megawatt power plant was constructed. Mine output expanded from 2.3 million metric tons per year (Mt/yr) of ore to 3.75 Mt/yr, and exploration has increased reserves of zinc by 25% (CRU International Ltd., 2005).

Terramin Australia Limited (Australia) announced that Sempra Metals (San Diego, CA) and Macquarie Bank Limited (Sydney, Australia) would invest up to A\$18 million in its Angas Project, which is believed to be South Australia's largest zinc deposit. The funds will continue project drilling, project design and costing, and early capital expenditures—if and when the decision to mine was made. Total indicated and inferred resources were calculated to be approximately 2.8 million metric tons grading 8.9% zinc, 3.3% lead, 42 grams per metric ton (g/t) silver, and 0.6 g/t gold. The company also announced that it concluded a joint partnership agreement with Zinifex Australia Limited (Melbourne, Australia). Zinifex would invest up to A\$8 million in the Mennennie Dam project to earn up to a 70% share in the joint venture (Terramin Australia Limited, 2005<sup>1</sup>).

## References Cited

Antaike, 2005, Market Commentary—Zinc in May: Antaike, China Metal Market – Lead & Zinc, Tin Monthly, no. 103, June, p. 4-7.  
CRU International Ltd., 2005, CRU Monitor—Zinc: CRU International Ltd., June, 12 p.

## Internet Reference Cited

Terramin Australia Limited, 2005, Corporate website—ASX/Press Releases, accessed August 23, 2005, via URL <http://www.terramin.com.au/>.

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<sup>1</sup>A reference that includes a section mark (§) is found in the Internet Reference Cited section.

TABLE 1  
SALIENT ZINC STATISTICS<sup>1</sup>

(Metric tons, unless otherwise specified)

	2004	2005			
	January- December	March	April	May	January- May
<b>Production:</b>					
Mine, zinc content of concentrate	739,000	66,600	58,900	55,400	295,000
Mine, recoverable zinc	713,000	64,100	56,700	53,300	284,000
Smelter, refined zinc	320,000	22,700 <sup>e</sup>	23,400 <sup>e</sup>	23,900 <sup>e</sup>	120,000 <sup>e</sup>
<b>Consumption:</b>					
Refined zinc, reported	421,000	34,100	33,500	33,800	169,000
Ores <sup>e</sup> (zinc content)	727	61	61	61	303
Zinc-base scrap <sup>e</sup> (zinc content)	191,000	15,900	15,900	15,900	79,400
Copper-base scrap <sup>e</sup> (zinc content)	176,000	14,700	14,700	14,700	73,400
Aluminum-and magnesium-base scrap <sup>e</sup> (zinc content)	1,430	120	120	120	598
Total <sup>e</sup>	790,000	64,900	64,300	64,500	323,000
Apparent consumption, metal <sup>2</sup>	1,160,000	81,200	91,300	82,900	426,000 <sup>3</sup>
<b>Stocks of refined (slab) zinc, end of period:</b>					
Producer <sup>4</sup>	XX	9,760	9,420	7,470	XX
Consumer <sup>5</sup>	XX	56,300	56,900	56,400	XX
Merchant	XX	10,200	10,200	10,200	XX
Total	XX	76,300	76,500	74,100	XX
Shipments of zinc metal from Government stockpile	28,900	--	--	--	--
<b>Imports for consumption:</b>					
Refined (slab) zinc	812,000	68,100	56,700	NA	239,000 <sup>6</sup>
Oxide (gross weight)	103,000	7,480	6,700	NA	30,000 <sup>6</sup>
Ore and concentrate (zinc content)	231,000	11,800	5,910	NA	40,000 <sup>6</sup>
<b>Exports:</b>					
Refined (slab) zinc	3,300	4	69	NA	385 <sup>6</sup>
Oxide (gross weight)	14,400	1,450	1,240	NA	4,290 <sup>6</sup>
Ore and concentrate (zinc content)	745,000	35,800	13,700	NA	77,200 <sup>6</sup>
Waste and scrap (gross weight)	53,900	6,790	3,860	NA	18,000 <sup>6</sup>
<b>Price:</b>					
London Metal Exchange, average, dollars per metric ton	\$1,047.35	\$1,377.33	\$1,299.81	\$1,243.23	\$1,298.40
Platts Metals Week North American Special High Grade, average, cents per pound	52.47	66.49	63.03	60.46	63.20

<sup>e</sup>Estimated. NA Not available. XX Not applicable. -- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; except prices; may not add to totals shown.

<sup>2</sup>Smelter production plus imports minus exports plus shipments from Government stockpile plus stock change.

<sup>3</sup>Data based on reported consumption, stocks, and estimated trade data.

<sup>4</sup>Data from U.S. Geological Survey and American Bureau of Metal Statistics.

<sup>5</sup>Includes an estimate for companies that report annually.

<sup>6</sup>Includes data through April only.

TABLE 2  
REFINED ZINC PRODUCED IN THE UNITED STATES<sup>1</sup>

(Metric tons)

Month	Beginning stocks <sup>2</sup>	Production	Shipments	Ending stocks <sup>2</sup>
2004:				
May	7,300 <sup>e</sup>	28,600	28,300	7,660
June	7,660 <sup>e</sup>	28,600 <sup>e</sup>	29,900	6,340
July	6,340 <sup>e</sup>	29,200 <sup>e</sup>	29,200	6,390
August	6,390 <sup>e</sup>	29,300 <sup>e</sup>	29,300	6,370
September	6,370 <sup>e</sup>	24,100 <sup>e</sup>	23,400	7,020
October	7,020 <sup>e</sup>	23,800 <sup>e</sup>	23,700	7,070
November	7,070 <sup>e</sup>	23,500 <sup>e</sup>	23,800	6,780
December	6,780 <sup>e</sup>	20,200 <sup>e</sup>	20,500	6,430
January-December	XX	320,000	321,000	XX
2005:				
January	6,430 <sup>e</sup>	24,600 <sup>e</sup>	21,200	9,860
February	9,860 <sup>e</sup>	25,600 <sup>e</sup>	24,500	11,000
March	11,000 <sup>e</sup>	22,700 <sup>e</sup>	24,000	9,760
April	9,760 <sup>e</sup>	23,400 <sup>e</sup>	23,800	9,420
May	9,420 <sup>e</sup>	23,900 <sup>e</sup>	25,800	7,470
January-May	XX <sup>e</sup>	120,000 <sup>e</sup>	119,000	XX

<sup>e</sup>Estimated. XX Not applicable.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes stocks held at locations other than smelters.

Sources: U.S. Geological Survey and American Bureau of Metal Statistics.

TABLE 3  
APPARENT CONSUMPTION OF REFINED ZINC  
ACCORDING TO INDUSTRY USE AND PRODUCT<sup>1</sup>

(Metric tons)

Industry and product	2004	2005			
	January- December <sup>2</sup>	March	April	May <sup>2</sup>	January- May
Galvanizing:					
Sheet and strip	477,000	33,900	38,200	34,100	176,000
Other	167,000	10,700	12,900	11,100	58,000
Total	644,000	44,600	51,100	45,200	234,000
Brass and bronze	188,000	12,700	13,600	13,300	67,100
Zinc-base alloy	244,000	17,500	19,600	17,800	91,600
Other uses <sup>3</sup>	85,800	6,400	7,100	6,600	33,600
Grand total	1,160,000	81,200	91,300	82,900	426,000

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Data based on reported consumption, stocks, and estimated trade data.

<sup>3</sup>Includes zinc used in making zinc dust, desilvering lead, powder, alloys, anodes, chemicals, castings, light metal alloys, rolled zinc, and miscellaneous uses not elsewhere specified.

TABLE 4  
AVERAGE MONTHLY ZINC PRICES<sup>1</sup>

Period	North American	LME <sup>2</sup> cash	
	¢/lb.	¢/lb.	\$/t
2004:			
May	51.76	46.63	1,027.93
June	51.33	46.32	1,021.08
July	50.08	44.81	987.94
August	49.44	44.24	975.39
September	49.23	44.22	974.83
October	53.31	48.28	1,064.49
November	54.81	49.68	1,095.18
December	58.53	53.52	1,179.83
January-December	52.31	47.21	1,040.84
2005:			
January	61.54	56.51	1,245.81
February	64.49	60.14	1,325.81
March	66.49	62.47	1,377.33
April	63.03	58.96	1,299.81
May	60.46	56.39	1,243.23
January-May	63.20	58.89	1,298.40

<sup>1</sup>Special High Grade.

<sup>2</sup>London Metal Exchange.

Source: Platts Metals Week.

TABLE 5  
U.S. EXPORTS OF ZINC<sup>1</sup>

Material	2004		2005 <sup>2</sup>			
	Quantity (metric tons)	Value (thousands)	April		Year to date	
			Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Refined (slab) zinc	3,300	\$5,330	69	\$112	385	\$824
Ore and concentrate (zinc content)	745,000	413,000	13,700	6,330	77,200	32,600
Waste and scrap (gross weight)	53,900	48,300	3,860	4,930	18,000	19,300
Powders, flakes, dust (zinc content)	7,640	13,500	892	1,650	3,190	6,460
Oxide (gross weight)	14,400	19,800	1,240	2,280	4,290	7,410
Chloride (gross weight)	1,870	2,200	165	212	795	951
Sulfate (gross weight)	3,060	1,860	303	198	987	637
Compounds, other (gross weight)	194	711	103	67	381	357

<sup>1</sup>Data are rounded to no more than three significant digits.

<sup>2</sup>Data for May 2005 were not available at time of publication.

Source: U.S. Census Bureau.

TABLE 6  
U.S. IMPORTS FOR CONSUMPTION OF ZINC<sup>1</sup>

Material	2004		2005 <sup>2</sup>			
	Quantity (metric tons)	Value (thousands)	April		Year to date	
			Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Refined (slab) zinc	812,000	\$888,000	56,700	\$76,900	239,000	\$310,000
Ore and concentrate (zinc content)	231,000	98,700	5,910	4,760	40,000	30,200
Waste and scrap (gross weight)	10,800	7,740	797	701	2,690	2,330
Powders, flakes, dust (zinc content)	24,800	40,200	1,690	3,080	7,190	12,700
Oxide (gross weight)	103,000	89,000	6,700	9,910	30,000	35,800
Chloride (gross weight)	705	863	39	43	220	398
Sulfate (gross weight)	29,100	14,000	2,340	1,310	10,100	5,260
Compounds, other (gross weight)	4,660	4,230	488	494	2,140	2,040

<sup>1</sup>Data are rounded to no more than three significant digits.

<sup>2</sup>Data for May 2005 were not available at time of publication.

Source: U.S. Census Bureau.

TABLE 7  
SHIPMENTS OF ZINC METAL FROM THE NATIONAL DEFENSE  
STOCKPILE<sup>1</sup>

(Metric tons)

Period	Beginning inventory	Shipments	Ending inventory
2004:			
May	85,600	14,700	70,900
June	70,900	1,170	69,800
July	69,800	44	69,700
August	69,700	3,360	66,400
September	66,400	--	66,400
October	66,400	--	66,400
November	66,400	--	66,400
December	66,400	--	66,400
January-December	XX	19,300	XX
2005:			
January	66,400	--	66,400
February	66,400	--	66,400
March	66,400	--	66,400
April	66,400	--	66,400
May	66,400	--	66,400
January-May	XX	--	XX

XX Not applicable. -- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

Source: Defense Logistics Agency.

TABLE 8  
U.S. IMPORTS OF ZINC, BY TYPE OF MATERIAL AND COUNTRY<sup>1,2</sup>

(Metric tons)

Material and country	General imports			Imports for consumption		
	2004	2005		2004	2005	
		April	Year to date		April	Year to date
<b>Ore and concentrate (zinc content):</b>						
Australia	27,900	--	--	27,900	--	--
Ireland	17,700	--	4,410	17,700	--	4,410
Mexico	6,530	367	4,550	6,530	367	4,550
Peru	178,000	5,540	31,100	178,000	5,540	31,100
Other	877	--	--	877	--	--
<b>Total</b>	<b>231,000</b>	<b>5,910</b>	<b>40,000</b>	<b>231,000</b>	<b>5,910</b>	<b>40,000</b>
<b>Blocks, pigs, or slab:</b>						
Australia	7,940	--	1	27,500	597	7,590
Brazil	26,400	2,880	13,100	26,400	2,880	13,200
Canada	501,000	44,400	171,000	501,000	44,400	171,000
China	35	--	--	16,500	323	876
Japan	--	--	--	690	--	--
Kazakhstan	2,310	--	--	2,310	--	--
Korea, Republic of	8,030	5,030	5,030	31,900	50	863
Mexico	123,000	8,410	44,600	123,000	8,410	44,600
Namibia	47,900	--	--	47,900	--	--
Peru	25,600	72	90	30,500	72	688
Poland	--	--	--	--	--	--
Other	204	--	--	3,970	--	225
<b>Total</b>	<b>743,000</b>	<b>60,800</b>	<b>234,000</b>	<b>812,000</b>	<b>56,700</b>	<b>239,000</b>
<b>Dross, ashes, fume (zinc content)</b>	<b>16,100</b>	<b>1,230</b>	<b>5,020</b>	<b>16,100</b>	<b>1,230</b>	<b>5,020</b>
<b>Grand total</b>	<b>990,000</b>	<b>67,900</b>	<b>279,000</b>	<b>1,060,000</b>	<b>63,900</b>	<b>284,000</b>
<b>Oxide (gross weight):</b>						
Canada	49,700	3,760	16,900	49,700	3,760	16,900
China	207	--	38	207	--	38
Italy	13,400	3	2,550	13,400	3	2,550
Japan	1,060	109	357	1,060	109	357
Mexico	33,200	2,300	7,970	33,200	2,300	7,970
Netherlands	4,700	448	1,860	4,700	448	1,860
Other	796	74	326	796	74	326
<b>Total</b>	<b>103,000</b>	<b>6,700</b>	<b>30,000</b>	<b>103,000</b>	<b>6,700</b>	<b>30,000</b>
<b>Other (gross weight):</b>						
Waste and scrap	10,800	797	2,690	10,800	797	2,690
Sheets	2,500	159	617	2,500	159	617
<b>Powders, flakes, dust (zinc content)</b>	<b>24,800</b>	<b>1,690</b>	<b>7,190</b>	<b>24,800</b>	<b>1,690</b>	<b>7,190</b>

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Data for May 2005 were not available at time of publication.

Source: U.S. Census Bureau.